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Gr. 13

ONTARIO DEPARTMENT OF EDUCATION

CURRICULUM S-8

GRADE 13 CURRICULUM BULLETIN
CHANGES EFFECTIVE 1966/67

1966

CONTENTS

Introduction	2
Accountancy Practice	4
Art	5
Biology	6
Chemistry	9
English	11
Français	14
Geography	16
Greek	18
History	20
Latin	21
Mathematics	25
Mathematics of Investment	27
Modern Languages	28
Music	29
Physics	30
Secretarial Practice	32

INTRODUCTION

This edition of Curriculum S. 8 incorporates reductions in course content for the purposes of the 1967 Grade 13 Departmental examinations and suggestions for course enrichment.

Please note that there are changes from the 1965-66 edition of Curriculum S. 8 in most subjects. Significant deletions and changes occur in areas where there have been a close examination and re-evaluation of existing Grade 13 courses of study, i.e., Biology, Chemistry, Geography, Mathematics and Physics.

This bulletin is a consequence of the approval by the Minister of Education of Recommendations Nos. 1 and 2 of the *Report of the Grade 13 Study Committee, 1964*.

The Recommendations read as follows:

- 1 "That, for the purposes of the 1965 Departmental examinations, steps be taken to remove from the Grade 13 course of study in each subject, topics which at present require a total of approximately three weeks of teaching time, and that announcement of these reductions be made before September 1, 1964.
- 2 "That brochures be prepared for distribution to teachers in September, 1964 as a guide to the most advantageous use of the additional time which will be at their disposal because of the reductions in course content referred to in Recommendation No. 1.
"It is not the intention to shorten the academic year. Teachers should be reminded to consider the reduction in topics not as an opportunity to 'cover' the course of study by an earlier date and thus to have more time for drill, but as an opportunity to experiment with teaching in greater depth, to provide the enrichment which comes from wider reading, and to 'stretch the students' minds in various desirable ways.
"The proposed deletion of topics is a temporary measure."

With the two recommendations as their terms of reference, curriculum revision committees representing the universities, the Grade 13 teachers and the Department of Education have once again, as for the academic

years 1964-65 and 1965-66, made suggestions with respect to several courses of study.

Approval has been given for the changes, noted herein, in the courses of study for 1966-67. They are set down in two parts for each subject or group of subjects. Part A consists of deletions of specific items of content; Part B of suggestions for course enrichment.

PART A

REDUCTION OF THE EXISTING COURSE

The objective in this part is "to relieve some of the pressure upon the candidates". Teachers are advised that the reduction in course content will not alter the basic pattern of the Grade 13 examination of 1967 unless such alteration is specifically indicated herein.

Because textbooks are not "authorized or approved" for Grade 13, any reference to a particular textbook is for the purpose of identifying items of course content and should not be interpreted as a prescription of that textbook for use in all classes.

In most instances the items to be deleted from the courses are indicated by page reference to the authorized courses of study. The official curriculum publications for the subjects of study in Grade 13 are listed below.

Accountancy Practice – Curriculum RP-31, Commercial Subjects

Art – Curriculum S.13, Art

Biology – Curriculum S.17B, Biology

Chemistry – Curriculum S.18, Chemistry

English – Curriculum RP-S4, English, Circular 58, Prescriptions 1966-67

Français – Curriculum RP-46 (Revised 1964)
Programme de Français, Classes
Secondaires de Langue Française,
Circular 58, Prescriptions 1966-67

Geography – Curriculum S.7, Geography, Senior Division, 1966

Greek – Curriculum I and S.11, Latin and Greek, Circular 58, Prescriptions 1966-67

History – Curriculum S.9, History, Senior Division

Latin – Curriculum I and S.11, Latin and Greek, Circular 58, Prescriptions 1966-67

Mathematics – Curriculum S.12C, Mathematics, Senior Division, 1966
Curriculum S.12, Mathematics, Senior Division

Mathematics of Investment – Curriculum RP-31, Commercial Subjects

Modern Languages – Curriculum I and S.15, Modern Languages
Curriculum RP-15, French
Curriculum I and S.43, Spanish
Circular 58, Prescriptions 1966-67

Music – Curriculum I and S.16, Music, Circular 58, Prescriptions 1966-67

Physics – Curriculum S.17C, Physics

Secretarial Practice – Curriculum RP-31, Commercial Subjects

PART B

SUGGESTIONS FOR TEACHING IN DEPTH

The aim here is to suggest means whereby selected areas of the course may be presented in depth so that students may have some experience of study at the university level. Depending upon the nature of the subject, the suggestions may take the form of comments upon possible methods of approach, or they may identify certain areas of content considered suitable for enrichment.

Teachers are advised that items used in Part B for purposes of illustration or elucidation are not to be considered as prescriptions for the external Grade 13 examinations.

Teachers must be free to determine for their own classes the elements of the course to be studied in depth. At the same time, however, the entire purpose of this approach would be defeated if the students came to regard the enrichment phase of their course as something apart from the basic, prescribed content on which they are to be examined. The teacher should, therefore, guard against the introduction of new material unless he is convinced that it will illuminate topics already on the course.

For this reason it is urged that, whatever the topic selected for “study in depth”, it should be an extension, elaboration, reappraisal, or expansion of one or more “prescribed” topics rather than a separate section of the course, perhaps unrelated to the basic core.

The practice of scheduling special weeks or periods for “study in depth” would not be in accord with the Study Committee’s intent, particularly if it created the impression among students that there were two disparate elements in the course.

ACCOUNTANCY PRACTICE

PART A

REDUCTION OF THE EXISTING COURSE

- 1 Section No. 4 (Bankruptcy) on page 28 of Curriculum RP-31 is to be deleted.
- 2 Section No. 6 (Machine Accounting and Data Processing) on page 28 of Curriculum RP-31 is to be deleted.

PART B

SUGGESTIONS FOR TEACHING IN DEPTH

- 1 Practice sets may be used. A number of these are available, either in the reference books, from publishers or from industry. They provide the student with practice in working a problem covering the entire accounting cycle and assist him to understand the relationship of the parts and the whole. They may also serve as a useful review.
- 2 The students should become familiar with the use of diagrams to trace the flow of information through a business. Block diagrams of the main systems of a business should be prepared and the idea of analysing a business system by flow charting should be stressed.
- 3 Current business topics of student interest could be studied through reading weekly, monthly or quarterly publications. Selected topics could be presented by students in essay or oral form or by discussion.
- 4 An attempt should be made to develop an appreciation of the impact on accounting systems of mechanization and automation.

REFERENCE BOOKS

FINNEY AND MILLER, *Introductory Accounting*, Prentice-Hall

JOHNSON, *Accounting Systems in Modern Business*, McGraw-Hill

NOBLE AND NISWONGER, *Accounting Principles*, (South-Western) Gage

SEGGIE, *Basic Accounting*, Pitman

ART

PART A

REDUCTION OF THE EXISTING COURSE

The following sections of Curriculum S.13, Art are to be deleted:

- Section 8, Unit 1, America Before Columbus (page 43)
- Section 8, Unit 2, The Era of Colonial Dependence (page 43)
- Section 9, Unit 1, Art of Native American Peoples (page 45)

PART B

SUGGESTIONS FOR TEACHING IN DEPTH

The time made available as a result of the deletions noted above might be profitably devoted to a concentration on those sections of the course which the development of contemporary art of the Western World, and especially that of the American scene, is partly dependent.

The material is to be found in the following sections:

- Section 6, Unit 2, Painting: The Permanent Revolution (pages 38-40)
 - b) Romanticism
 - c) Realism
 - d) Impressionism
 - e) Post-Impressionism
- Section 7, Unit 1, Modern Movements in Painting (pages 40-41)
 - a) The Fauves-Expressionist Tendency
 - b) The Cubistic-Abstraction Tendency
 - c) The Fantasy-Surrealist Tendency
- Section 7, Unit 3, Modern Movements in Architecture (page 42)
 - a) The Cubist Tendency

BIOLOGY

PART A
REDUCTION OF THE EXISTING COURSE
(Reference: Curriculum S.17B)

PAGE	TOPIC	CHANGES
1	Preamble	– delete the existing preamble and insert the following:

The primary purpose of this course is to teach the students enough detail of structure and function to enable them to understand the basic biological principles outlined in the following paragraphs. The background provided should be ample for those wishing to continue the study of Biology at university, but chiefly it should enable *all* students to acquire a broader view of life.

The course is a study of the mechanisms involved in the basic principles of **ENERGETICS, REPRODUCTION AND HEREDITY, and EVOLUTION.**

Unit I provides an excellent opportunity to introduce these fundamental biological principles at the beginning of the course without any detailed discussion at this stage.

Energetics involves the changing of one type of energy to another, the degrading of other forms of energy to heat energy, the sun as the original source of energy, and the interdependence of living organisms with respect to energy-rich materials. Students should realize that, without these energy changes, life as we know it could not exist. In order to understand these changes students should become familiar with the basic cellular structures and chemical processes occurring in organisms, as outlined in Unit II.

In Unit III students become acquainted with the structure of a highly developed plant, and of an animal, both consisting of complicated systems made up of organs, tissues and cells. In this unit students learn how energy changes are controlled and how the various systems must work together harmoniously to maintain homeostasis for the benefit of the entire organism. If any part of a system becomes defective, the whole plant or animal is in jeopardy.

The time allotted to Unit IV is sufficient only to show students that an orderly system or classification (although a constantly changing one) has been developed whereby plants and animals have been arranged in

groups based on common characteristics and relationships.

An organism cannot live by itself alone. Unit V stresses that both cooperation and competition among organisms are frequently necessary for survival. Cooperation may provide security and a division of labour that results in better survival conditions for a particular group of organisms. On the other hand, even within a group or between groups there is competition for the necessities of life which are found within their physical environment. Man himself is in constant competition for survival with such organisms as bacteria, fungi, viruses and insects. For all plants and animals, competition is a way of life.

Disease, accident or aging will eventually cause the death of any organism. The continuity of germ plasm is maintained by means of reproduction, whether sexual or asexual. Asexual reproduction maintains the characteristics of the parents, while sexual reproduction introduces variations that may lead to evolutionary changes. These changes may affect subsequent generations and may result in the development of new species.

Cell division, preceded by the replication of genetic materials, is the fundamental form of reproduction. Every cell in the body of an organism carries in its genes the same information code. In spite of this, cells differentiate, forming specialized kinds such as muscle or nerve cells, tracheids or sieve tubes. Apparently, the genes determine the definitive form of the plant or animal by operating through the environment of the cells to determine the types they will become. The development of the cell, therefore, depends on both its genetic material and environment.

The climax of the course is found in that part dealing with evolution. If our society is to be capable of laying down desirable guide lines for the future development of all its resources, we must understand the past history of earlier types of plants and animals. We must try to determine why some species are becoming extinct while others are surviving and continuing to evolve. To ignore such questions could lead to our eventual extinction.

Students who have considered the phenomena of life, the intricate structure of living organisms and the complex changes occurring in these organisms, should acquire a new and deeper understanding of Biology and a continuing interest in it.

The number of periods indicated (each of approximately 40 minutes) is merely a suggestion, or a guide to the depth of treatment. This is based upon one period per day of formal teaching time. It is strongly recommended that additional time be scheduled for laboratory work related to this course.

“Systematic notebook and observational records are essential.”

PAGE	TOPIC	CHANGES
2	Unit I-1	– after the heading, “Movements in Animals and Plants”, insert “One living specimen should be used to illustrate each type of movement. Examples given below are suggestions only.”
2	Unit I-3	– line 2, after “fission” delete “e.g.”, read “one of amoeba or hydra, and one of plant bulbs, plant cuttings, bacteria, chlamydomonas”.
2	Unit I-3(i)	– line 5, after “spore formation” delete “e.g.”, insert “one example of”.
3	Unit II-2	– line 7, after “indicating important linkages” insert “: ester, glucoside, and peptide”
4	Unit II-4(b)	– line 4, delete “oxidation of fats and proteins”, insert “reference to the fact that, after preliminary processing into (2-carbon) fragments, fats and proteins may enter the same metabolic pathway as glucose;”
4	Unit II-5(b)	– before “Syntheses” insert “Brief treatment of”
4	Unit II-7	– delete last paragraph, “Factors influencing . . . diffusion”
6	Unit III-2(e)	– after “bones” insert “(names and descriptions of individual muscles and bones are not required)”
6	Unit III-2	– delete “Nervous System . . . nerves, connective,” insert “Nervous system: brain, (main parts), spinal cord, motor nerves, sensory nerves, mixed nerves, sense organs (details of structure of sense organs not required except for the eye). Note that prepared dissections, rather than class dissections of

brain and spinal cord should be used.

“Neurons: motor, sensory, connector; structure (cell body, axon, dendrite); reflex arc; associated connective tissue.”

7	Unit III-3	– line 5, delete “examples of” – line 7, delete “by examples of these”, insert “by the example selected”
8-9	Unit IV	– Classification of Organisms: replace the entire unit with the following: “(4 periods) “This unit provides a brief introduction to the purpose and principles of classification of organisms. “1. Brief history of systematics: Linnaean system; present system “2. Discussion of the principles involved in classification of organisms; meaning of species, genus, family, order, class, phylum, kingdom, as illustrated by the classification of the domestic cat “3. Identification of common Ontario conifers by use of a simple dichotomous key (Note: characteristics of the groups to which the cat and the conifers belong are not required for examination purposes)”
10	Unit V-4	– line 3, delete the portion within brackets and insert “(the effects on each organism from the association should be stressed)”
10	Unit V-4	– Line 4, delete “Two or three examples”, insert “One example”
11	Unit VI-2	– line 5, after “alternation of generations” insert “(treated generally to show the occurrence of the haploid-diploid cycle in plants and animals)”
11	Unit VI-3	– line 4, delete “Seed size”, insert “Spore, seed”
11	Unit VI-3	– line 6, limit discussion of “differentiation” in plants to the development of the embryo in

the seed; in animals to the development of the three primary germ layers of the gastrula

- 11 Unit VI-3 – lines 8 to 11, delete last sentence and insert “Relation of numbers of offspring to parental care in maintaining population.”

PART B

SUGGESTIONS FOR TEACHING IN DEPTH

The changes from Curriculum S.17B have removed 14 periods from Unit IV. This time should be allocated as follows:

- 5 additional periods to Unit II
- 5 additional periods to Unit III
- 4 additional periods to Unit VI

Additional time saved by the other deletions may be applied to experimental work and to a better understanding of the course material.

CHEMISTRY

PART A REDUCTION OF THE EXISTING COURSE

PAGE	UNIT	PART	SUB PART	DELETIONS
4	II	3	(ii)	– “the effect of copper . . . to the solution.)”
9-10	IX	2	(i)	– “the action of sodium and potassium on water”
			(ii)	– “(a) to produce sodium hydroxide from lime.”
		3		– “The production . . . Demonstration experiment.”
		5		– “The uses . . . permanganate.” and Note “In this . . . uses depend.”
10	XI	1	(i)-(v)	– “An experimental . . . with copper”
		5	(part)	– “Properties and uses of hydrofluoric . . . cryolite.”
11	XIII	4		– “The commercial . . . cyanamide.”
		5		– “The properties . . . hydrate”
11	XIV	3		– “The properties . . . sulphide”
12	XVII	3	(i) (ii)	– “(i) carbon, (ii) sulphur,”
		5		– “An experiment . . . air”
		6		– “The preparation . . . water”
		7		– “The properties . . . phosphate.”
12	XVIII	1	(part)	– “and hydrogen sulphide”
		3		– “Demonstration . . . paints.”
12-13	XIX	1	(part)	– “The Bessemer . . . furnace.”
		2		– “Some important . . . alloys”

		3		– “The tempering . . . steel”
14	XXII	4		– “Types . . . medium).”
		6		– “Practical . . . precipitator”
16	XXIII	D 2(c)		– “Regeneration . . . guncotton.”

PART B SUGGESTIONS FOR TEACHING IN DEPTH

- Most of the references to properties and uses of substances have been deleted for examination purposes. However, it is realized that interest is in many cases promoted by relating the chemistry course to chemicals in common use. Teachers may therefore increase depth of treatment by treatment of uses even though some have been deleted for examination purposes. In treatment of uses an attempt should be made in every case to show upon what properties the uses depend.
- Certain industrial processes have been retained on the course. It is hoped that when possible the teacher can draw upon experience and knowledge of local industry to enrich the discussion of these.
- Many teachers have difficulty in covering Unit VIII, The Concentration of Solutions, in five periods. It should now be possible to devote sufficient time to taking up the various types of numerical problems listed in this unit. Every student could also be given the opportunity to perform the experiments in this unit.
- The modern trend in chemical education, which will undoubtedly be reflected in subsequent revisions of the Grade 13 course of study, places much emphasis on atomic, molecular and crystal structure, and on the forces that bind atoms or molecules together. From these considerations it is much easier to interpret and remember many of the physical and chemical properties of substances. In seeking areas of enrichment related to the present course of study, teachers might with advantage lay more stress on atomic structure and the periodic classification as unifying concepts and as aids to interpreting similarities and gradations in properties. To illustrate the preceding, it is of interest to relate

the easy formation of halide ions from halogen atoms to the so-called electron affinity of the latter, and similarly the almost complete absence of positive halogen ions is a consequence of the high ionization potentials of the elements. The size of the atoms and ions can be considered in relation to the numbers of electrons surrounding the nucleus, and consequently the oxidizing or reducing tendencies in this group can, at least in part, be related to the ease of removal of an electron from the outer shell of a series of halide ions of different size.

- 5 It will probably be helpful to introduce oxidation-reduction as an electron transfer process earlier in the year than suggested by the place of Unit XX in the present course. It is, for instance, practical to interpret the gradation in stability of the hydrogen halides (Unit XI - 4) as reflecting the graded ease of removal of an electron from the halide ion.
- 6 Much of the inorganic chemistry in the course involves reactions among ionized substances in solution. It will be advantageous to place greater emphasis on the discreteness of the ions in such solutions, particularly by the device of introducing and consistently using ionic equations wherever applicable. It may also be desirable to make pupils aware of the difference between gaseous ions and solvated (hydrated) ions, and the fact that the dissolving of substances, particularly electrolytes, involves substantial interaction with the solvent.
- 7 In seeking up-to-date and authoritative resource material for background and enrichment in the newer approaches to chemistry, teachers would be well advised to provide themselves with the recently published volumes from the Chemical Education Materials Study Programme (CHEM Study) in the U.S.A. The relevant titles are:

Chemistry – An Experimental Science Textbook

Chemistry – An Experimental Science – Teachers' Guide

Chemistry – An Experimental Science – Laboratory Manual

These may be ordered direct from the publisher W. H. Freeman and Company, San Francisco, California. The second volume is available *only* to teachers. It is understood that pupils will not be required to buy these books.

ENGLISH

PART A

REDUCTION OF THE EXISTING COURSE

Since 1960 the content of the prescriptions in English has been progressively reduced to allow for the required comparative study beyond the core course prescribed for examination purposes, and for the literary essay work related to the prescribed texts. This reduction and the attendant purposes are in accord with the intent of the resolutions of the Grade 13 Study Committee.

As a result, the intent of the resolutions has already been partially realized.

In addition to the above, because of adequate coverage in Grade 12 (see Curriculum RP-S4, page 16) the following topics are to be omitted:

Topic 7, Logic, page 16 of Curriculum RP-S4

Topic 8, The Report, pages 16 and 17 of Curriculum RP-S4

Topic 9, Business Letter Writing, page 17 of Curriculum RP-S4

PART B

SUGGESTIONS FOR TEACHING IN DEPTH

Because the topics for reading and study printed below are suggestions only, teachers are free to determine for their own classes the elements of the course to be studied in depth. The students should be allowed as wide a scope as possible in their selection of topics for reading and the preparation of a critical essay related to the course in literature. For most classes probably one phase of the course enriched in this way will be sufficient.

SUPPLEMENTARY READING

Curriculum RP-S4, in the general comments referring to Grades 11, 12 and 13, contains the statement, "A considerable amount of reference reading, including literary criticism, should also be required . . ." Since the actual Grade 13 course outline does not specifically mention this point, teachers might well require their students to correlate some of their supplementary reading with the literature studied. Such supplementary reading of a related creative or critical work will reinforce and deepen the student's appreciation of the course.

COMPOSITION

The kind of supplementary reading mentioned above, and the comparative study that it will encourage, should be linked closely to the course in composition. The English Composition outline in Curriculum RP-S4 requires "at least one longer expository essay of 1000 to 1500 words . . ." Circular 58, under Note 1 on page 6, allows time "for literary essay work related to the prescribed texts." At least one longer expository essay should be a critical essay related to the course in literature. The topics for such an essay should be assigned early in the course to give students guidance in their supplementary reading and time for planning.

Such topics as those listed below may also be treated: (a) in general class discussion led by the teacher, (b) in panel discussions with a student chairman, (c) in general class discussion preceded by a student's reading his essay on the topic, (d) in some other appropriate way that suggests itself to the teacher.

DRAMA

- 1 Basing discussion on the plays, *Saint Joan* and *Hamlet*, a comparison of Shaw's concept of tragedy with that of Shakespeare
- 2 A discussion of Shaw's theory of the dominant woman, based on evidence in *St. Joan* and in another play such as *Candide* or *The Millionairess*
- 3 The Shakespearean tragic figure: a comparison of *Hamlet* with the protagonist of another Shakespearean tragedy such as *Othello* or *Macbeth*
- 4 Compare the defining circumstances of tragedy in *Hamlet* and *Saint Joan*
- 5 *Saint Joan* and *Ophelia* as tragic heroines
- 6 *Hamlet* and *Kurtz*
- 7 ". . . but all Shakespeare's projections of the deepest humanity he knew have the same defect: their characters and manners are lifelike, but their actions are forced on them from without, and the external force is grotesquely inappropriate except when it is quite conventional, as in the case of *Henry V*." Consider this pronouncement by Shaw to determine how well it fits *Hamlet* or *Saint Joan*.
- 8 Shakespeare's *Joan* (*Henry VI* at the Stratford Shakespearean Festival) and Shaw's *Joan*
- 9 Discuss the relative significance of the external and the internal conflicts in the play *Hamlet*

- 10 Illustrate from *Hamlet* the use of soliloquies (a) to reveal character, (b) to create atmosphere, (c) to advance the plot
- 11 Hamlet's character, as seen through the eyes of a student of Harley Granville-Barker (*Prefaces to Shakespeare*)
- 12 Hamlet's character, as seen through the eyes of a student of A. C. Bradley (*Shakespearean Tragedy*)
- 13 Foils to Hamlet, as they illuminate his character and actions by their actions and speech: Laertes, Polonius, Horatio, Rosencrantz and Guildenstern, Osric, Ophelia
- 14 The Polonius and Hamlet families: a study in child-parent relationships and their effects on the story
- 15 *Hamlet* – a stage play and not a study in abnormal psychology
- 16 Elizabethan acting and the stage, with particular reference to Hamlet's discussions with the players
- 17 Fashions in acting *Hamlet* – a history of various productions (perhaps illustrated)
- 18 The imagery of Hamlet
- 19 Melancholy: a Humour (A discussion of the Elizabethan meaning of melancholy with particular reference to Hamlet) (Burton: *The Anatomy of Melancholy*).
- 20 Is Hamlet a lineal descendant of Brutus (a comparison)?
- 21 The enigma of Hamlet
- 22 "Dotage encroaching upon wisdom" – a study of Polonius
- 23 Hamlet: a greater tragic figure than Macbeth (comparison)?
- 24 Shakespeare's view of kingship: Hamlet, Macbeth, (Henry IV, Richard II) (a comparison)
- 25 Shakespeare's minor characters: the master's touch (a comparison of two or three plays)
- 26 Proscenium arch and Shakespearean stage (e.g. Stratford): limitations, advantages, flexibility
- 27 Shakespeare faced his heroes with no choice, but a dilemma (a discussion of two or three tragedies: *Hamlet*, *Macbeth*, *Othello*)

POETRY

- 1 A study of other poems by Dylan Thomas, or a study of *Under Milk Wood*
- 2 A comparison of several poems by two contemporary poets, for example, Auden and Frost, Keats and Shelley, Eliot and Thomas
- 3 Compare Wordsworth's treatment of nature in "Tintern Abbey" with that of Coleridge in "This Lime Tree Bower"
- 4 The treatment of childhood in the works of such poets as Dylan Thomas, William Wordsworth, Abraham Klein, Randall Jarrell
- 5 The treatment of nature in the works of two poets, such as D. H. Lawrence, Theodore Roethke, P. B. Shelley
- 6 The theme of love in the works of two poets, such as T. S. Eliot, Rupert Brooke, Elizabeth Browning, Robert Browning, William Wordsworth

- 7 The theme of beauty in the works of two poets, such as Shelley, Keats, Byron
- 8 Image, metaphor, symbol, and myth in modern poetry
- 9 The modern Canadian poet: a study of the poetry of one poet, such as Klein, Cohen, Layton, Johnston, Reaney
- 10 *Contrast* Roethke's treatment of nature with the treatment in Whitman's "There Was a Child Went Forth," Hopkins' "Pied Beauty," and Thomas' "The Force That Through the Green Fuse"
- 11 Robert Lowell's "Home After Three Months Away." This is one of Lowell's most personal poems. Compare and contrast the tone of this poem with that of any of his other poems: "For the Union Dead," "After the Surprising Conversions"
- 12 The lyric poem

PROSE

- 1 A study of the short story in the twentieth century, using stories in all three parts of *Man and His World*
- 2 A study of other short stories and essays or a novel by an author on the core course. Related study might include C. P. Snow, *The New Men*, Penguin; H. G. Wells, *Selected Short Stories*, Penguin; *A Lost Lady*, Cather
- 3 The short story and the essay approach the study of man in his world from different directions. Illustrate the difference in approach from the works prescribed
- 4 Show how man is related to his world in the short stories prescribed, or in the prescribed essays
- 5 Faulkner – Essayist, orator, and novelist
- 6 C. P. Snow – The Philosopher Statesman
- 7 The short story and the essay as avenues to understanding

THE NOVEL

- 1 The betrayal of a trust is an important theme in *Heart of Darkness*, as it is in "An Outpost of Progress" and "The Lagoon". A comparison of Conrad's treatments of this theme in these three works
- 2 A comparison of Conrad's use of irony in *Heart of Darkness* with his use of it in "An Outpost of Progress"
- 3 Compare Conrad's treatment of colonialism in *Heart of Darkness* and "An Outpost of Progress"
- 4 Compare the Marlow-Kurtz relationship with either that of the Captain and Leggatt in "The Secret Sharer" or that of Horatio and Hamlet in *Hamlet*
- 5 Discuss Conrad's treatment of the theme of apprenticeship to life in *Heart of Darkness*, "The Secret Sharer", and *Youth*
- 6 The autobiographical elements in Conrad's *Heart of Darkness*
- 7 Symbolism in *Heart of Darkness*
- 8 C. P. Snow as a novelist – *The New Men*

ADDITIONAL REFERENCE WORKS

Daiches, David, ed., *White Man in the Tropics*, *Two Moral Tales*, Harcourt Brace

Conrad, Joseph, *Under Western Eyes*, Penguin
Snow, C. P., *The New Men*, Penguin
Freedman, N., and McLaughlin, *Poetry, an Introduction to its Form and Art*, Harper's, New York
Gwynn, Condee and Lewis, *The Case for Poetry*, Prentice Hall, New York

FURTHER TOPICS FOR STUDY

- 1 Man in his world as revealed in the Stratford Shakespearean Festival 1966 productions (*Twelfth Night*, *Henry V*, *Henry VI, Part I*)
- 2 In some sense, every work of literature presents a *case*, as in Willa Cather's "Paul's Case"
- 3 Man – "the glory, jest, and riddle of the world."
(Alexander Pope) How are these aspects of man in his world illustrated in the words prescribed?

PARTIE A

REDUCTION DU PROGRAMME D'ETUDE

Le comité a cru qu'il était plus avantageux de réduire un peu chacune des sections du programme pour fin d'examen plutôt que de supprimer toute une section, un auteur ou un ouvrage, et de conserver ainsi un éventail plus vaste de sujets parmi lesquels les professeurs puissent trouver matière à une étude en profondeur.

En conséquence, il n'y aura pas de questions d'examen sur ce qui suit:

- 1 Marion: *Beaux Textes des Lettres françaises*:
Daudet: Les douaniers
Barbier: La cavale
Verlaine: Dialogue mystique
Nelligan: Soir d'hiver
- 2 *Cécile parmi nous*
- 3 *Rue Deschambault*
"Le Titanic" et "Ma tante Thérésina Veilleux"
- 4 *Contes choisis*
Leclerc, F., Le hamac dans les voiles

PARTIE B

SUGGESTIONS EN VUE DE L'ETUDE

APPROFONDIE

Relativement à l'emploi et à l'organisation du temps que la réduction du programme d'études met ainsi à la disposition des professeurs pour enseigner certains sujets d'une façon plus approfondie, voici quelques commentaires et suggestions qui pourront s'avérer utiles.

1 BUTS À ATTEINDRE

Il faut remarquer, selon les directives officielles, que, si cette réduction a pour résultat d'alléger le fardeau des examens finals, elle n'a pas pour but d'abrégier du cours ni d'accorder plus de temps à l'étude de la matière au programme comme telle, ni même encore de consacrer trois semaines à la revue pure et simple de la matière enseignée au cours de l'année. La préoccupation du professeur devrait être plutôt de donner à l'enseignement de la littérature française une nouvelle dimension qui soit à la fois, pour les élèves, une source d'enrichissement personnel et une préparation aux études universitaires.

2 ORGANISATION ET RÉPARTITION DU TEMPS

Cette organisation du temps peut se concevoir de différentes façons. Toutefois, il faudrait éviter de consacrer trois semaines d'affilée à un programme d'enrichissement. Des groupements de quatre, de trois et même de deux périodes sont préférables.

A titre de suggestion on pourrait considérer la répartition suivante. L'ensemble du programme peut se diviser en trois sections: *pièces dramatiques, romans, morceaux et contes*, chacune de ces sections comportant une partie "approfondie", et une partie "étude sommaire". Si l'on ajoute une partie "enrichissement du programme", on obtient ainsi trois divisions pour chacune des sections:

a) étude approfondie

Iphigénie
(7 semaines)

Cécile parmi nous
(4 semaines)

Textes choisis
(8 semaines)

b) étude sommaire

On ne badine pas avec l'amour
(4 semaines)

Rue Deschambault
(2 semaines)

Contes
(2 semaines)

c) enrichissement

au choix du professeur
(1 semaine)

au choix du professeur
(1 semaine)

au choix du professeur
(1 semaine)

3 SUGGESTIONS MÉTHODOLOGIQUES

La liste des sujets d'étude que l'on pourrait proposer est inépuisable et elle devra nécessairement varier selon les professeurs, les élèves et le milieu. Cependant, certaines considérations s'imposent.

Dans les commentaires publiés par le Ministère de l'Éducation sur les réponses des candidats aux examens de français, on fait état de l'incapacité des candidats à reconnaître dans les questions les mots clefs tels que "appréciez", "justifiez", "tragique"; en composition surtout, on déplore chez un grand nombre de candidats l'insuffisance de lecture, le manque de maturité et de bon goût, l'indigence de l'imagination, la banalité du style, l'inhabileté à penser d'une façon claire et suivie. Dès lors, ne devient-il pas de première nécessité au cours de cette année pré-universitaire qu'est la 13^e année, d'orienter l'enseignement dans le sens d'un accroissement de la culture générale et de l'épanouissement de la personnalité par la maîtrise de la langue et de conjuguer étroitement, en tout temps, l'enseignement de la composition et celui de la littérature? A plus forte raison, le programme d'enrichissement devra-t-il se poursuivre dans cette voie.

En outre, il importe que l'élève acquière une méthode efficace de travail personnel. Sans doute cette formation a-t-elle débuté dans les années antérieures; cependant, en 13^e année, elle devrait se poursuivre d'une façon plus intense. Le choix et le traitement des sujets devraient donc favoriser l'exercice de la recherche personnelle, la connaissance et l'usage des services de bibliothèque, la consultation des ouvrages de référence, l'interprétation des témoignages, documents, notices bibliographiques, commentaires, etc. L'élève devrait de là passer à la pratique de divers genres de travaux que ce soit par écrit (rapport, dissertation, analyse littéraire, essai, etc.) ou oralement, (séminaire, table ronde, débats, etc.).

Quant aux méthodes, il en existe une variété pouvant s'exercer de manières différentes, parfois sur le même sujet. Le professeur adoptera la méthode qui s'accorde le mieux avec les buts spécifiques d'un enseignement particulier.

Ainsi, dans le choix d'une méthode pour étudier le genre lyrique – sujet de théorie littéraire – on pourrait employer *la méthode inductive*, fondée sur l'examen et la discussion de quelques textes, suivant les étapes: observation, comparaison, généralisation. Par ailleurs, on pourrait préférer partir d'une notion théorique du genre lyrique pour en découvrir l'application dans les mêmes textes: ce serait *la méthode déductive*. Un professeur, désirant traiter les grandes étapes de l'histoire de la littérature française, pourrait avoir recours à *la méthode expositive* (dite de "cours"), profitant alors de l'occasion pour entraîner ses élèves à prendre des notes, à les compléter et à rédiger. *La méthode dite du "séminaire"*, en certaines circonstances, pourrait se prêter à une étude intéressante d'un sujet particulier. Voudrait-on amener les élèves à examiner jusqu'à quel point l'art de Musset est le reflet de la société d'une époque, la méthode de recherche personnelle pourrait paraître tout indiquée. Si l'on avait présenté en classe le destin tragique des héros

de la pièce *Iphigénie*, on pourrait par la méthode comparative diriger une étude semblable des héros de la pièce *Antigone* de Jean Anouilh.

Quelle que soit la méthode qu'il emploie, le professeur ne devrait pas négliger d'en rendre ses élèves conscients et de donner ainsi à son enseignement, non seulement une valeur purement académique, mais encore une valeur de formation et de préparation aux études universitaires. Enfin, inutile d'insister pour que le professeur se serve de toutes les ressources de son art et surtout des aides pédagogiques que la technique moderne met à sa disposition: documents, illustrations, disques, films, bandes sonores, diapositives diagrammes, tableaux, etc. Son enseignement en sera plus vivant, plus marquant.

Quant aux sujets dont on pourrait faire une étude approfondie, on a l'embarras du choix. A cette enseigne, on pourra consulter avec profit les anthologies, les diverses éditions des "Petits Classiques" ou les nombreux manuels de dissertation littéraire, d'explication de textes, de critique et de théorie littéraires. Ces ouvrages traitent d'une foule de sujets parmi lesquels les professeurs trouveront d'utiles suggestions qu'ils devront adapter, selon leur bon jugement, aux besoins de leur enseignement, sans crainte d'éliminer, de combiner, ni de modifier. Les sujets les plus fertiles sont encore ceux que les professeurs inventeront eux-mêmes, en corrélation étroite avec le programme d'études. Ces sujets ne devraient pas être trop vastes: il ne s'agit pas de lancer les élèves dans des travaux de thèse doctorale ou de fine polémique.

GEOGRAPHY

PART A

REDUCTION OF THE EXISTING COURSE

NOTE – The following deletions and suggestions for teaching in depth have been incorporated in Curriculum S.7, 1966.

- 1 One month only should be allocated to the study of Part A, *The Physical Environment of Man's Activities in Canada* as outlined on pages 18, 19, and 20 of Curriculum S.7, 1960. This unit should consist of a broad study partly for introductory purposes.
- 2 Regarding Part A, Section 3, Climate, (page 19 of Curriculum S.7, 1960) the study should be confined to:
 - a) Climate controls: latitude, air circulation, masses and fronts, distribution of land and water, elevation, relief barriers, ocean currents
 - b) Principal characteristics: temperature and precipitation
 - c) Major climate divisions. The major vegetation patterns of Canada should be related to these divisions
 - d) Delete Section 4
- 3 In Part A, item 5, Soil Zones of Canada, page 20 of Curriculum S.7, change to read as follows:
 - a) Soil groups related to climate and vegetation
 - b) Soil groups: Podzols, gray brown podzolic soils, chernozem soils, chestnut and brown soils, tundra soils
 - c) Delete this item, i.e. Agricultural Soil Resources
- 4 In Part B, *Geographical Regions of Canada*, substitute the following regions for those listed on pages 20-21 of Curriculum S.7. In the study of a region the significant aspects should be stressed. It is not necessary to follow completely the suggested outline for the study of a region.

ATLANTIC REGION

A region of "cultural diversity and unity, matched by physical variety and integration". This region, dominated by the sea, is distinguished from its neighbours by having fewer developed natural resources relative to population, and a lag in economic development. Recent efforts by both government and industry have improved the situation somewhat, but significant problems still remain.

THE LOWLANDS OF SOUTHERN ONTARIO AND QUEBEC: THE INDUSTRIAL HEARTLAND

An area which forms the most intensely farmed and highly industrialized section of Canada; a section rich in local differences based on people and soil, and with a wide range of occupations and activities. In this region where almost 75 per cent of the Canadian population lives are the largest English-speaking and French-speaking groups. While variety is rife, the region is caught up into an over-all unity. Here is a region uniquely situated between the mineral, power and forest resource-producing area to the north and the most highly industrialized and most densely populated part of the United States to the south. Here is the link between the coast and the interior, between the eastern and western provinces – made more effective by the St. Lawrence Seaway. Here is the nation's highest development of finance, trade and manufacturing, the chief concentration of population and capital.

WESTERN PLAINS

A landbound region with a challenging environment and a changing geography, a region boasting large farms, extensive ranches, and mushrooming cities. Until recently this area had a monolithic economy based on agricultural production, exposing people to sharp fluctuations of income when there were variations in world markets and climatic conditions. Other primary resources – petroleum, natural gas, potash – and the manufacturing and recreation industries play an increasingly important role and are producing a more balanced economy. The population is extremely mixed, since settlement was late and rapid and people came from many different lands. This rapid and large-scale mixing of people with very different background has enriched Canadian life.

THE CORDILLERAN REGION

This is one of the most dynamic areas of Canadian development in this decade. A sense of optimism is matched with an almost explosive pace of development. This is a land of great potential natural resources which require great amounts of capital and large organizations for their exploitation. This is an area where labour organizations are strong. Resource

exploitation patterns, location of settlements and transportation facilities are closely related to distinctive natural patterns. One of the great metropolitan centres of Canada is developing on the West Coast. Although the growth of prosperity has depended largely upon the development of international markets, "there is a strong effort to direct feeling more strongly to other parts of Canada and to link themselves more closely to potential markets and suppliers of raw material in the Prairies. Of special concern have been pipelines for oil and gas, improved highways, and a rapid expansion of tourist and 'retirement' attractions of Canada's 'California'."

THE NEAR NORTH

That part of Boreal Canada which has been effectively tapped economically by settled Canada. The economy is associated with primary resource development – principally forestry, mining, and the smelting and refining of metals. Transportation facilities are vital to the development of the resources of this region. It is crossed by transcontinental railways, air routes and highways, and the use of the hinterland for recreational purposes is becoming increasingly important. The relative importance of the Ontario and Quebec sections of the Shield will become evident.

ARCTIC CANADA (approximately 1 week)

Arctic Canada, though still empty and quiet, is waking up and being developed. It is acquiring recognition as a region with its own problems and opportunities. The North exemplifies the problems of Canadian development in extreme form: great spaces, few people and almost inaccessible potential resources, to which are added the problems rising out of the meeting of different cultures. Government has been playing an important role in all aspects of northern development. It is relatively straight-forward merely to arrange for the exploitation of inert materials, but it is a much more complex and difficult task to create a new and better habitat for man, especially when the peoples occupying an area have different cultural mores.

- 5 Within the regional studies of Part B, two of the following sub-regions are to be studied in detail.
 - a) Lac St. Jean *or* The Peace River Area
 - b) Niagara Peninsula *or* Northwestern Ontario
- 6 Of the many urban studies which teachers, in the past, felt should be included to give the course the fullest treatment, only the following need be given intensive treatment for 1966-67:
Montreal, Winnipeg, and *either* Vancouver *or* Halifax.
- 7 In Part C, the National Wealth of Canada: its Development, Utilization and Conservation
 - a) Delete 2a) ii), iv), and v)
 - b) Delete 2c) ii), iv). In 2c) iii) only iron ore, petroleum, and potash are to be studied as examples

- c) Delete 2e) iv)
- d) Delete section 3, *Canadian Unity*
- e) Delete section 4, *Relation of Canada to the World Community*

- 8 Within the study of Parts A and B of the course, topographic maps should be used to aid the geographic studies. The following list of maps may serve as a guide:

Lac St. Jean

Hebertville		1:50,000
Arvida		1:50,000
Bagotville		1:50,000
Chicoutimi	22D	1:250,000
Roberval	32A	1:250,000

The Peace River Area

Peace River		1:50,000
Grimshaw		1:50,000
Dawson Creek		1:50,000
Grande Prairie		1:250,000
Dawson Creek		1:250,000

Northwestern Ontario

Jarvis River		1:50,000
Twin Cities		1:50,000
Thunder Cape		1:50,000
Quetico	52B	1:250,000

Niagara Peninsula

Niagara East		1:50,000
Niagara West		1:50,000
Beamsville	30M/3c	1:25,000
Welland/Port Colborne	30L/14f	1:25,000
St. Catharines	30M/3g	1:25,000
Queenston	30M/3L	1:25,000
Niagara Falls	30M/3a	1:25,000
Fonthill	30M/3c	1:25,000

PART B

SUGGESTIONS FOR TEACHING IN DEPTH

The teaching time gained as a result of the deletions and reductions noted in Parts A and C of Curriculum S.7 should be spent on providing the students with greater opportunities to become more familiar with the use and the analysis of topographical maps that are representative of the major geographical regions, or of the sub-regions indicated in item 5.

Furthermore, students should study geographical problems of local interest. The problems might be investigated as group activities or as individual projects and the findings should be reported in the form of seminars or classroom discussions. During the study of a problem, the students should gain some experience in investigation techniques such as field work, direct enquiry, access to reference materials, analysis of local maps and documents where available, and in presenting their findings.

GREEK

PART A

REDUCTION OF THE EXISTING COURSE

Teachers should consult Circular 58 for the Greek Authors prescription for 1966-1967. Re: Curriculum I and S.11, Page 48, the following forms and constructions are specifically excluded from the required knowledge for translation of English into Greek, for grammatical questions based on the prescribed authors, or for translation into English of Greek sight passages. However, students will be expected to be able to translate any of these points which occur in the authors prescribed in Circular 58.

1 FORMS

- a) ordinals and adverbs above "five"
- b) duals
- c) vocatives
- d) declension of κρέας, γραῦς, πῆχυσ
- e) δείκνυμι — types of verbs
- f) future perfect system
- g) omicron-contract verbs

2 CONSTRUCTIONS

- a) genitive of cause
- b) ὅστις and the future indicative to express purpose
- c) ἐφ' ᾧ, ἐφ' ᾧτε (on condition that) construction
- d) ἥ ὥστε to translate English "too", e.g. "too big for me to carry"
- e) monitory future condition
- f) φθάνω and its construction with the participle
- g) impersonal verbs πάρεστι, λυσιτελεῖ, πρέπει, προσήκει, συμφέρει, μέλει, μεταμέλει, μέτεστι
- h) accusative absolute
- i) verbal adjectives
- j) dative of agent
- k) attraction of the relative
- l) all verbs of "preventing" and "hindering" and their special construction except κωλύω
- m) double negatives (μὴ οὐ) except in clauses of fearing
- n) μὴ used generically
- o) ὥφελον to express wishes

PART B

SUGGESTIONS FOR TEACHING IN DEPTH

The importance of closely integrating the "study in depth" with the prescribed course cannot be overstressed; as a corollary, it may well prove advisable to distribute the additional material as unobtrusively as possible throughout the school year.

- 1 *Additional sight reading in Greek* of passages relevant to the prescribed authors, selections. The textbook containing the Grade 13 authors, *A Greek Reader for Schools*, or one of the books suggested by the Department annually for prose authors in Grade 12, could provide excellent reading for this purpose.
- 2 *Reading in translation* of selections relevant to the prescribed prose authors. For example, it would be possible through the many paperback editions now on the market to read some of the tales from Herodotus or the climactic scenes from the Persian Wars; such famous passages from Thucydides as the escape from Platsea, the plague description (along with some case histories from Hippocrates and his "oath"), Pericles' funeral oration, *stasis* in Corcyra or the Sicilian expedition; the *Apology* of Plato and/or *Memorabilia* of Xenophon; additional parts of the *Odyssey*. Students could also be introduced to the *Clouds* of Aristophanes. Some teachers may prefer to use an anthology such as *The Spring of Civilization: Periclean Athens* by C. A. Robinson, Jr. (Clarke, Irwin — paperback). Thus a few days could be spent at intervals throughout the school year to supplement the prescribed authors, and students might gain greater insight into the brilliance of the century about which their prose authors wrote.

The titles in this and subsequent lists are only a few of the many that might be suggested.

HERODOTUS, *Histories*, translated by de Selincourt, Penguin

THUCYDIDES, *Peloponnesian War*, translated by Rex Warner, Penguin

HOMER, *Odyssey*, translated by Rouse, New American Library: Mentor

or

HOMER, *Odyssey*, translated by E. V. Rieu, Penguin

ARISTOPHANES, *Five Comedies of Aristophanes*, translated by B. B. Rogers, Doubleday Anchor
PLATO, *The Last Days of Socrates*, (Apology, Crito, Phaedo), Penguin

or

PLATO, *Euthyphro, Apology, Crite*, with the death scene from *Phaedo*, revised translation by Cumming, The Library of Liberal Arts

- 3 *Background reading of modern books* about the prescribed authors and their periods. Teachers could consider such books as the following:

A. R. BURN, *Pericles and Athens*, Crowell: Collier

C. M. BOWRE, *The Greek Experience*, New American Library: Mentor

M. FINLEY, *The World of Odysseus*, World

H. D. F. KITTO, *The Greeks*, Pelican

REX WARNER, *The Greek Philosophers*, New American Library: Mentor

M. SMITH, *The Ancient Greeks*, Cornell

W. R. AGARD, *What Democracy Meant to the Greeks*, Wisconsin

H. M. HERGET, *Everyday Life in Ancient Times*, National Geographic

LISTER SINCLAIR, *Socrates*, Book Society of Canada

MAXWELL ANDERSON, *Footloose in Athens*

MICHELINE SAUVAGE, *Socrates and the Human Conscience*, Longmans

M. I. FINLEY, *The Ancient Greeks*, Viking Press

ROBINSON, *Everday Life in Ancient Greece*, Oxford

- 4 *Short essays* could be assigned pertaining to the prescribed authors. For these the teacher could direct students to a combination of the first three suggestions above: Additional reading of background books, Greek in translation and perhaps a little additional Greek. In some schools the Classics teacher may thus find himself giving students their first chance to write a critical, as opposed to a creative, essay.

- 5 A period or two spent on *films or filmstrips* can be beneficial provided the pictures shown have clear relevance to the prescribed authors. Similarly, teachers may consider using C.B.C. school broadcasts or such *recordings* as Plato, *On the Death of Socrates* (Folk 9979).

- 6 *Reading verse aloud*. Some teachers will want to devote more time to practising the reading aloud of Homeric verse. A tape-recorder can be useful for this, especially in small Greek classes.

- 7 *Thirty-minute lectures* to introduce each prescribed author. In addition to giving much background in a short time, these could help prepare students for the transition to university methods. Such general works as H. J. Rose, *A Handbook of Greek Literature* (now available in Dutton Everyman paperback) are helpful for this.

NOTE ON ADDITIONAL TITLES:

Teachers desiring a recent listing of publishers' addresses could consult pages 23 to 27 of the Latin Booklist.

Teachers are reminded that lists of paperbacks, text-

books and audio-visual materials are published periodically in *The Classical World*. Enquiries for subscriptions can be directed to *The Classical World*, Fordham University, 441 East Fordham Road, Bronx 58, New York.

It is worth remembering that teachers can usually borrow books from the libraries of the universities from which they graduated, and that occasional articles in periodicals can be reproduced ("Xeroxed") at about ten cents a page through university libraries. Probably teachers should work through the school librarian with Inter-library Loan at the appropriate university.

HISTORY

PART A
REDUCTION OF THE EXISTING COURSE

- 1 It is suggested that in Part One (pages 27, 28) Section I, The British and French Empires in North America, and Section II, The American Revolution, should be treated extensively in a few introductory lessons, probably not more than five.
- 2 Section III of Part One, The Survival of British North America (page 28) should be regarded as an integral part of the course in Canadian History, forming the introduction to it. It will probably be studied when this part of the work is begun in January.
- 3 In Part Two, Section III A., Economic Advance after the Civil War (page 29), the general nature of the post-war economic advances and the economic, social and political consequences are of crucial importance. It is suggested, however, that the details are not considered essential to an understanding of the problems.
- 4 For examination purposes, the study of the History of the United States of America and of Canada will end with 1945. The following topics will, therefore, be treated extensively:

PAGE	PART	SECTION	SUB-SECTION	TITLE
30	Two	IV	C	The Challenge of Western Leadership
30	Two	IV	D	American Culture
32	Three	IV	E	Modern Canada
32	Three	IV	F	Canadian Culture

PART B
SUGGESTIONS FOR TEACHING IN DEPTH

Under direction, a student should develop one or more themes essential in the structure of the course. A major assignment in such an area should measure his ability to read outside the text, or texts, to examine a wide variety of – and often conflicting – sources, to analyze his material and to organize it in a logical and lucid manner for presentation. The importance of the student’s continuing work of this nature throughout some part of the course cannot be over-emphasized. It becomes his term work.

No useful purpose will be served if the term mark in History is based only on the results of term examinations.

It must be determined in part after consideration of the student’s term work.

There must be evidence in class of this study in depth as it develops during the year, evidence of wide reading and the bibliographic skill that should result from it, preparation and presentation of the formal essay, participation in seminars and discussion lessons.

To illustrate the manner in which this enrichment phase of the student’s work may be a part, or an extension, of the basic prescriptive course, the following themes are offered as suggested areas in which a major assignment may be given:

The nature and problems of Canadian and American federal systems;
The causes and results of the American Civil War;
The history of English-French relations in Canada.

It need scarcely be pointed out that the above topics appearing as illustrations of studies in depth encompass major parts of the course. It should therefore be understood that the content represented by these topics is not excluded from the examination.

PART A

REDUCTION OF THE EXISTING COURSE

- 1 Teachers should consult Circular 58 for the Latin Authors prescription for 1966-67.
- 2 In the Departmental examination of 1967, the following grammatical points are not to be required knowledge for translation of English into Latin or for grammatical questions based on prescribed authors, but where the meanings of any of these points can be readily recognized by an average student they need not be eliminated from a passage to be translated at sight from Latin into English. Students will be expected to be able to translate any of these points which occur in the authors prescribed in Circular 58. Although textbooks are not authorized or approved in Grade 13, teachers may find the reference given here to Breslove's *Latin Composition* a help in clarifying the points to be deleted from Curriculum I and S.11.

REFERENCES TO I AND S.11	POINTS TO BE DELETED	REFERENCES TO BRESLOVE <i>Latin Composition</i>
A.1.(I) (c)	conative imperfect	3c
	historical infinitive and its subject nominative	26
A.1.(II) (c)	genitive with words indicat- ing plenty and want	31B
A.1.(II) (f)	genitive of equivalence	35
A.1.(II) (i)	genitive of price	38
A.1.(III) (i)	dative of reference	56
A.1.(VI) (m)	ablative of attendant cir- cumstances	75
B.3.(VI) (a)	uses of <i>neve</i> and <i>neu</i> in purpose and	84c
B.3.(V) (e)	indirect command	102
B.3.(VI) (a)	<i>quo</i> in purpose clauses	86
A.1.(VI) (q) 3.	phrases like <i>ab hora septi- ma ad vesperum</i>	98c
A.3.(I)	<i>ipse</i> as an indirect reflexive the omission in Latin of any equivalent for the word "that" in such sentences as, Caesar's army is larger than <i>that</i> of the Gauls	109e 111d

A.2.	<i>ipsius</i> and <i>ipsorum</i> in appo- sition to possessive adjec- tives	112b
A.2.	<i>vir</i> (or <i>homo</i>) with an adjec- tive in apposition to a name	115e
A.3.(I)	the distinction between <i>cet- eri</i> and <i>reliqui</i>	125C
A.3.(I)	the use of <i>quisque</i> following a reflexive, superlative (to show a class) or an ordinal	130b
B.3.(XI) (e)	the distinction between <i>nisi</i> and <i>si . . . non</i> , and the use of <i>sin</i>	139a, b
	the indicative used to show that a clause is <i>not</i> part of indirect discourse	142
B.3.(XV) (b)	virtual indirect discourse	145
B.3.(VII) (e)	result clauses used to trans- late "without"	150
B.3.(VII) (f) 4.	relative clauses of character- istic following a compara- tive with <i>quam</i>	152e
B.3.(VII) (f) 2.	relative clauses of character- istic with <i>quin</i>	152f
B.3.(X) (c)	relative clauses of reason	170
B.3.(X) (d)	clauses of rejected reason	172
B.3.(XII) (c)	use of concessive clauses to translate "instead of"	175
B.1.(IX) (c)	<i>cum</i> with relative force often preceded by <i>co tempore</i> or <i>igitur</i>	180
B.3.(XIII)	clauses of proviso	192
B.3.(II) (f)	potential subjunctive, in- cluding its use in rhetorical questions	196, 62
	use of gerund to avoid ambi- guity, e.g. <i>ars vers ac falsa diudicandi</i>	210b
	the use of <i>utor</i> and <i>potior</i> in the gerundive construction	211
B.7.(III)	personal use in Latin of some verbs which are often impersonal in English, e.g. <i>videor, dicor</i>	223
B.3.(XVI) (b)	use of <i>feri non potent quin</i> and <i>facere non possum quin</i>	237

B.1.(X)	clauses of comparison introduced by <i>ut</i> and <i>sicuti</i>	241a
B.3.(XIV)	clauses of comparison introduced by <i>quasi</i>	241b

PART B

SUGGESTIONS FOR TEACHING IN DEPTH

The importance of integrating the "study in depth" closely with the prescribed course cannot be over-stressed; as a corollary, it may well prove advisable to distribute the additional material as unobtrusively as possible throughout the school year.

Many of the books included in the Latin Booklist distributed last year will be useful in planning and presenting the Grade 13 work; this list should not, of course, be considered restrictive.

- 1 *Additional sight reading in Latin* of passages relevant to the prescribed authors, selections. Students could read some of the Caesar omitted from the prescription, although they might find the continuous indirect discourse rather difficult. More of the Cicero might also be read without the pressure of a final examination. However, as some students find that they do not enjoy the *Pro Lege Manilia* as much as some of Cicero's other writing, teachers may prefer to choose some of the *Letters* which reveal another side of Cicero; a few may be found in the Supplementary Section at the back of the Grade 13 text. There are several letters (e.g. *Ad Atticum* I.13 and I.14) which show Cicero's relationship with Pompey in the years after the defeat of Mithridates. If time permits, teachers might read one or both of the passages omitted from this year's Vergil.

With the lyric poetry, one might read poems from the other Cycles which shed light on those in the current prescription. For example one could read "Passer deliciae meae puellae" before "Lugete o veneres". Similarly in the discussion on Catullus, "Iam ver egelidos" and Horace's "Diffugere nives" one might read "Solvitur acris hiems" and perhaps other poems as an introduction to a discussion about the attitude of these poets to Spring and Nature in general.

Teachers wishing to go beyond the Grade 13 authors textbooks could choose some selections from Grade 12 authors textbooks, or use one of the numerous readers on the market.

- 2 *The reading in translation* of passages relevant to the prescribed authors. For example, by means of the many paperback editions now on the market, students could read more of the writings of the prescribed authors: perhaps the first six books of the *Aeneid*, some of the more obvious letters of Cicero, and some of the more interesting parts of Caesar's *Commentaries*. It is doubtful whether many students would profit much from reading additional lyrics of Horace

or Catullus without considerable help from the teacher. Some teachers may prefer to use such anthologies as Hadas and Swits, *Latin Selections* (Bantam), or Michael Grant, *Roman Readings* (Penguin).

Students might extend their knowledge of the first century B.C. in general and of their prescribed authors in particular by reading Plutarch's *Life of Caesar*, *Life of Cicero* and *Life of Pompey*, and might in so doing assess the literary power of an ancient historical biographer. In *Life of Pompey* the students could read of the success of the expedition against Mithridates and at the same time learn something of the stature of Pompey who so often is overshadowed in history by Caesar. In *Life of Caesar* may be found a brief reference to the revolt of the Eburones and students might compare the pictures of Caesar that emerge in Plutarch and in the Gallic Wars.

One approach might be to compare several translations of the same passage and to discuss which has the greater appeal. While this can be done with both prose and poetry, it is perhaps a more valuable exercise in the study of the verse where such a comparison can serve to lead into detailed study of the Latin in its own context.

Such paperbacks as the following may prove useful:

VERGIL, *Aeneid*, translated by C. D. Lewis, Doubleday: Anchor or
 VERGIL, *Aeneid*, translated by Dickinson, New American Library: Mentor
 HOMER, *Odyssey*, translated by Rouse, New American Library: Mentor or
 HOMER, *Odyssey*, translated by Rieu, Penguin
 PLUTARCH, *Eight Great Lives*, Holt, Rinehart, and Winston
 CAESAR, *The Conquest of Gaul*, translated by Handford, Penguin

- 3 *Background reading of modern books* about the prescribed authors and their period. Some of the many fine books now on the market are listed below. Teachers should use their discretion in deciding to what extent students can use these works. Certainly, there is not one of them that could not be used by students under certain circumstances.

PAPERBACKS

H. J. ROSE, *A Handbook of Latin Literature*, Dutton Everyman
 MICHAEL GRANT, *Roman Literature*, Pelican
 MICHAEL GRANT, *The World of Rome*, New American Library: Mentor
 D. R. DUDLEY, *The Civilization of Rome*, New American Library: Mentor
 TENNEY FRANK, *Life and Literature of the Roman Republic*, University of California Press
 R. H. BARROW, *The Romans*, Pelican
 F. R. COWELL, *Cicero and the Roman Republic*, Pelican
 RONALD SYME, *The Roman Revolution*, Oxford
 E. HAMILTON, *The Roman Way to Western Civilization*, New American Library: Mentor

J. CARCOPINO, *Daily Life in Ancient Rome*, Penguin
GILBERT HIGHET, *Poets in a Landscape*, Pelican

HARDCOVER

- L. R. TAYLOR, *Party Politics in the Age of Caesar*, California
F. R. COWELL, *Everyday Life in Ancient Rome*, Batsford
H. M. HERGET, *Everyday Life in Ancient Times*, National Geographic
J. BUCHAN, *Julius Caesar*, Davies, 1932
F. E. ADCOCK, *Caesar as a Man of Letters*, Cambridge: Macmillan
J. L. STRACHAN-DAVIDSON, *Cicero and the Fall of the Roman Republic*
C. J. FORDYCE, *Catullus*, Oxford University Press
KENNETH QUINN, *The Catullan Revolution*, Melbourne University Press: Macmillan
OTIS, VERGIL: *A Study in Civilized Poetry*, Oxford
L. P. WILKINSON, *Horace and His Lyric Poetry*, Cambridge: Macmillan
E. FRAENKEL, *Horace*, Oxford, The University Press
STEELE COMMAGER, *The Odes of Horace*, Yale University Press: McGill University Press
KENNETH QUINN, *Latin Explorations*, Routledge and Kegan Paul
L. P. WILKINSON, *Golden Latin Artistry*, Cambridge: Macmillan

- 4 Short essays could be assigned pertaining to the prescribed authors. For these, teachers could direct students to a combination of the first three suggestions above: the reading of a little additional Latin, some Classics in translation and background books. In some schools the Classics teacher may find that he is giving students their first opportunity to write a critical, as opposed to a creative essay. For this reason a teacher might be advised to give a considerable amount of help with the approach and methods suitable for a project of this type.

Many essay topics are possible: comparisons of authors, their styles, techniques, themes and so on; studies in character; historical or biographical essays; appreciation of particular passages, and so on. Teachers could select and announce a few at the beginning of the year so that students could be thinking about them and reading for them as the prescribed authors are taken up in class.

Wherever possible, students should be encouraged to relate their essays to the prescribed reading. An essay on Horace, for example, which merely catalogues the events of his life gathered from one of the standard literary histories will not be as interesting as one that connects the poems being read with his life (e.g. *O saepe mecum*) or his beliefs (e.g. *Rectius vives*).

- 5 The deletions announced above will allow more time to teach the prescribed authors as literature: with the help of such works as those mentioned in section 3 above, teachers (and students too, if the teacher assigns occasional small reports) can introduce more background analysis of structure and theme, and

comparison with other poems or passages. As a help to this end, some general articles on special aspects of Horace's *Odes* are given here:

- ANDREWES, "Horace's Use of Imagery in the Odes and Epodes". *Greece and Rome* 19 (1950), 106-115
N. E. COLLINGE, "Form and Content in the Horatian Lyric", *Classical Philology* 50 (1955), 161-168
S. COMMAGER, "Function of Wine in Horace's Odes", *Transactions of The American Philological Association* 58 (1957), 68-80
J. CORDRAY, "Structure in Horace's Odes: Some Typical Examples", *Classical Journal* 52 (1956-1957), 113-116
A. DALZELL, "Maecenes and the Poets", *Phoenix* 9 (1951), 151-162
J. FERGUSON, "Horace and Catullus", *American Journal of Philology* 77 (1956), 1-18
N. RUDD, "Patterns in Horatian Lyric", *American Journal of Philology* 81 (1960), 373-392
H. L. TRACY, "Thought-sequence in the Ode", *Phoenix* 5 (1951), 108-118

In addition there are numerous articles on individual poems in the various periodicals. Typical are the following three which all deal with the problems of Horace, *Odes*, I.9 (*Vides ut alta*).

- SULLIVAN, G. J., Horace, *Odes*, I.9, *American Journal of Philology*, vol. 84, 1963, p.2
SHIELDS, M. G., *Odes*, I.9, A Study in Imaginative Unity, *Phoenix*, vol. 12, 1958, p. 166
CUNNINGHAM, M. P., Enarratio of Horace, *Odes*, I.9, *Classical Philology*, vol. 52, 1957, p.98

- 6 A period or two spent on *films*, *filmstrips*, *slides* or *recordings* can have benefit provided the materials used have clear relevance to the prescribed authors. Folkways have a large number of Latin records, largely, if not entirely, by Hadas and Richards; the Karl Orff record, *Catulli Carmina*, would need judicious use. The C.B.C. school broadcasts direct some programs to the Grade 13 level. The Department's Latin tape recording should also be of some use.
- 7 *Reading verse aloud*. Some teachers will want to devote additional time to practising the reading aloud of the prescribed metres on the ground that the teaching of scansion should be a means to the end of reading, not an end in itself. In addition to using commercial recordings, teachers can let students practise and hear their own reading on a tape recorder.
- 8 Thirty-minute lectures to introduce each prescribed author. As well as giving much background in a short time, these could help prepare students for the transition to university methods.

Teachers are reminded that lists of paperbacks, textbooks and audio-visual materials are published periodically in *The Classical World*. Enquiries for subscriptions can be directed to – The Classical Association of the Atlantic States, Inc., Rutgers, The State University,

Newark College of Arts and Science, 12 James St., Newark, N.J. 07102.

It is worth remembering that teachers can usually borrow books from the libraries of the universities from which they graduated, and that occasional articles in periodicals can be reproduced ("Xeroxed") at about ten cents a page through university libraries. Probably, teachers should work through the school librarian with Inter-library Loan at the appropriate university.

MATHEMATICS

As indicated in the Introduction on page (i) of the course of study for Grade 13 Mathematics (Curriculum S.12C) both Introduction to Analysis (Mathematics A) and Algebra (Mathematics B) are to be shortened for the first years the courses are in use.

This will be achieved for the school year 1966-67 by the deletion of specific topics in Introduction to Analysis (Mathematics A) and by providing a choice of topics in Algebra (Mathematics B).

INTRODUCTION TO ANALYSIS (MATHEMATICS A)

For the school year 1966-67, the following topics in Curriculum S.12C will not be required

Unit 5, topic 6
Unit 6, topic 7
Unit 7, topic 4
Unit 8.

ALGEBRA (MATHEMATICS B)

For the school year 1966-67, the course will consist of: Units 1, 2, 4, 5, 6 and at least two of Units 3, 7, 8, 9.

THE GRADE 13 PROBLEMS EXAMINATION IN 1967

In June, 1967, the three-hour Grade 13 Problems paper will be based on the topics listed in Curriculum S.12C for Introduction to Analysis (Mathematics A) and Algebra (Mathematics B). The deletions and options in Mathematics A and B, announced for the school year 1966-67, will *not* apply to the 1967 Problems paper.

ALGEBRA, GEOMETRY AND TRIGONOMETRY AND STATICS

The following deletions apply only to those students who are eligible to write Grade 13 Departmental examinations in June, 1967, based on the courses of study in Mathematics in effect during the 1965-66 school year (c.f. Memorandum 1965-66: 92: Exam. 12). For these students no study in depth is suggested in this edition of Curriculum S.8.

PART A

REDUCTION OF THE COURSE

ALGEBRA

Page 19, Section 2, delete the words "and variation" from line 1 and delete lines 6 to 10, "the solution of

$ax + by + cz = 0$. . . fundamental theorems and exercises thereon."

Page 20, Section 4, in last paragraph, delete "its use in determining the maximum or minimum value of a quadratic function."

Page 20, Section 5, change line 7 to read

$$\frac{1}{x}, \frac{1}{x^2+1}, \frac{x}{x^2+1},$$

their graphs and their properties, but omitting algebraic determination of maxima and minima."

Page 21, Section 9, line 3, delete "bonds, debentures, mortgages, sinking funds."

NOTE – The topic of maxima and minima remains on the course, only the discriminant method for finding maximum and minimum values of functions has been removed.

GEOMETRY

Page 23, Section 7, paragraph 3, delete "latus rectum".
Page 23, Section 7, delete paragraph 7, "Diameters of a parabola".

Page 23, Section 7, after paragraph 8, "Examples of the occurrence of the parabola in physics", add "Eliminate problems relating to physics requiring knowledge of the formulas $s = \frac{1}{2}gt^2$ and $s = vt$, connected with the curve of flight".

Page 24, Section 8, lines 4 and 5, delete "latus rectum, eccentricity".

Page 24, Section 8, delete paragraph 3, "Diameters of an ellipse, conjugate diameters".

Page 24, Section 9, line 4, delete "(2) mechanical method using cord".

Page 24, Section 9, paragraph 3, delete "latus rectum, eccentricity".

Page 24, Section 9, delete last paragraph and substitute, "General concept of asymptote, discussion of the equations

$$y = \frac{b}{a}\sqrt{x^2 - a^2} \quad \text{and} \quad y = -\frac{b}{a}\sqrt{x^2 - a^2}$$

for large values of x ; asymptotes of hyperbolas."

NOTE – The terms "latus rectum" and "eccentricity" have been deleted in order to reduce the memorization of trivial formulas and their mechanical applications.

However, it is *not* intended to rule out the use of the definition of the ellipse in terms of focus, directrix and eccentricity if desired and locus problems based thereon.

TRIGONOMETRY AND STATICS

Page 28, Section 7, delete paragraph 1 and replace by “The solution of triangles with the aid of logarithms, using the law of sines”.

Page 28, Section 7, change the supplementary topics to read: Supplementary topic 1: “the functions of the half-angles”. Supplementary topic 2: “identities based on formulas for oblique triangles”.

Page 28, Section 9, delete line 2 to end of paragraph 1, as follows: “radius of circumscribed circle, . . . area of sector of circle.” Add the following sentence, “The development of the formula for the area of the triangle in terms of its sides, without the use of the half-angle formulas.” (See one of the new Grade 11 textbooks.)

Page 29, Statics, unit 4, delete “Couples”.

Page 30, Statics, unit 4, delete lines 1 and 2 and replace with “Centre of Gravity of a rod”.

Page 30, Statics, delete unit 6.

NOTE – The deletions in Statics are intended to indicate that the following sections of the two commonly used textbooks, listed below, do not need to be taught for the purpose of the Grade 13 examination in Trigonometry and Statics.

ELEMENTS OF TRIGONOMETRY AND STATICS, PETRIE ET AL

- Chapter XIX, Section 158, part C, page 345.
- Chapter XXI, All of Chapter except section 171.

PLANE TRIGONOMETRY AND STATICS, MILLER AND ROURKE

- page 281, and page 282 to example 1
- page 288, section 103 (except where reference is made to centre of gravity of a rod)
- page 291, Section 103.1
Section 104.2
Section 104.3 and problems not related directly to centre of gravity of a rod

MATHEMATICS OF INVESTMENT

PART A

REDUCTION OF THE EXISTING COURSE

- 1 Section No. 2 (Logarithms) on page 42 of Curriculum RP-31 is to be deleted.
- 2 Section No. 4 (Annuities) on page 43 of Curriculum RP-31 is to be changed to Annuities Certain, with the sub-topics in the section to remain the same.
- 3 Section No. 7 (Bond valuation) on page 43 of Curriculum RP-31 is to be reduced. The “use of Makeham’s formula” is to be deleted, and the remaining sub-topics in the section are to be retained in their present form.
- 4 Section No. 13 on page 44 of Curriculum RP-31, which deals with life insurance and life annuities, is to be reduced. It is to be a descriptive presentation, and the sub-topics:
“determination of net single premium, net annual premium; natural premium and reserve; gross premium;”
are to be deleted.

PART B

SUGGESTIONS FOR TEACHING IN DEPTH

- 1 Section No. 4 (Annuities Certain) on page 43 of Curriculum RP 31 can serve as the basis for the study of mortgages, which are now generally set up on a fixed monthly payment basis, with interest incorporated at an annual or semi-annual rate. The mortgage may be written for five years, but the amortization planned over fifteen years. To ascertain the amount of principal outstanding at a particular time is a practical problem. Similar problems can be developed concerning instalment buying.
- 2 Additional topics of particular interest to students in this course may also be introduced. Taxes can provide interesting problems, taking actual instances where communities sell tax certificates at a discount for prepayment of local taxes. Succession duty taxes on a definite legacy, to beneficiaries of various classes with estates of different sizes, may also be of interest. Foreign exchange is a further item which may be introduced.

REFERENCE BOOK

SHEPPARD AND BAILLIE: *Compound Interest*, University of Toronto Press.

MODERN LANGUAGES

FRENCH, GERMAN, SPANISH, ITALIAN, RUSSIAN

PART A

REDUCTION OF THE EXISTING COURSE

Since the teaching of modern languages in Grade 13 in the past has involved considerable work in translating continuous prose passages based on the prescribed authors texts and the memorization of a highly specialized vocabulary, for the year 1966-67 the policy introduced in 1964-65 will be continued and the teaching of such prose translation from English will not form part of the course. The vocabulary of translation from English into French, German, Spanish, Italian and Russian will consist of high-frequency words of everyday use.

PART B

SUGGESTIONS FOR TEACHING IN DEPTH

Note that items 1 to 4 deal with parts of the work prescribed for examination purposes.

- 1 More emphasis could be placed on free composition, involving topics based on the prescribed texts as well as other subjects. Oral discussion, leading to black-board synopses and outlines, could precede and prepare the way for written compositions which might be given as assignments.
- 2 More attention could be given to the study of the salient features of plot, characters and milieu of the prescribed authors text. Questions designed to elicit comprehensive answers, containing information drawn from various parts of the text, could supplement those dealing with isolated details.
- 3 More time could be spent on listening, comprehension and oral work.
- 4 More attention could be given to sight passages, not only from the point of view of comprehension, but also of word study and idiom.
- 5 If class sets are used for supplementary reading, some school time could be devoted to discussion and checking of such work. In the event of a variety of texts being used, an occasional period might be spent in having students write individual synopses of the books used.
- 6 Some time could be spent on a study of culture and civilization.
- 7 Radio programs could be used.

- 8 Teachers of French, Italian, Russian and Spanish are encouraged to read some poetry with those students who would profit from such an extension of the course.

MUSIC

PART A

REDUCTION OF THE EXISTING COURSE

The reduction in content will be accomplished by:

- a) less intensive study of the Schumann *Piano Concerto in A Major*
- b) deletion of the following three preludes by Debussy:
 - III Le vent dans la plaine
 - IV Les sons et les parfums tournent dans l'air du soir
 - V La sérénade interrompue

PART B

SUGGESTIONS FOR TEACHING IN DEPTH

- a) Grade 13 music students should be competent sight singers and for this purpose, they should be drilled thoroughly in tonic-solfa. As a development on intensive practice in sight singing to syllables, pupils should write simple melodies from dictation. Attention should be given to time (metre), to tone (pitch) and to hand signals.
- b) In order to provide a deeper appreciation of Bach's *Christ lag in toten Banden* the teacher could play similar works of the Baroque Period by Bach and other composers.

PHYSICS

PART A

REDUCTION OF THE EXISTING COURSE

1 The following section of Curriculum S.17C are to be deleted:

PAGE	UNIT	TOPIC	
4	II	1 How Light Behaves	– delete entire topic
5	II	2 Reflections and Images	– delete entire topic
5	II	3 Refraction	– delete entire topic

NOTE – Teachers will find it advisable to allow two periods for a demonstration-review of properties of light such as reflection, refraction including Snell's Law, dispersion and diffraction.

10	III	4 Momentum and the Conservation of Momentum	– delete statements two and four “The kinematic nature . . . Applications of Conservation . . .”
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NOTE – A study of the centre of mass is not included in this topic.

10	III	6 Potential Energy	– delete the word “mechanical” in section (d)
11	III	7 Heat, Molecular Motion and Conservation of Energy	– delete entire topic
11	IV	1 Introduction to Electricity	– delete the words, “and measurement” from (b); delete “Thermionic Emission” from (d)
14	IV	7 The Structure of Atoms	– delete, “The basis of wave mechanics”, from (e)

2 Reduction in depth of treatment.

Notwithstanding the general comments to Curriculum S.17C, the following sections which may have been treated quantitatively in the past should now be treated descriptively only; i.e. – without numerical problems.

PAGE	UNIT	TOPIC	
2	I	2 Space and its Measures	– the measurement of large distances only
3	I	3 Matter and Mass	– section (b)
8	II	7 Interference	– section (b)
8	II	8 Light Waves	– sections (b) and (c)
9	III	3 Universal Gravitation and the Solar System	– the entire topic

NOTE – Teachers may wish to reduce the time allotment for this topic to three periods.

12	IV	3 Energy and Motion of Charges in Electric Fields	– section (c)
13	IV	5 Exploring the Atom	– section (a)

3 The following sections should involve only simple problems.

4	I	5 Motion Along a Path	– section (d)
9	III	2 Motion in the Earth's Gravitational Field	– section (a)

PART B

SUGGESTIONS FOR TEACHING IN DEPTH

1 EXPERIMENTAL WORK

Student participation in experiments is essential. However, the amount of time to be devoted to each of the course experiments may be varied widely, depending on the importance of the topic or the interest of the class. As a Laboratory Guide for the PSSC Course states (Preface Page IV):

“Usually there is a basic part of the experiment which all students can complete. Other students, proceeding at their own pace, will go to more advanced questions which are asked toward the end of the description of each experiment. This procedure allows both the teacher and the student a considerable amount of choice, although there is enough direction so that important ideas are sure to be emphasized.”

2 FILMS

The viewing of certain films is an essential part of the course. Although availability and timing are matters of concern in showing the films, there is considerable latitude in the number which can be used successfully.

3 TELEVISION PROGRAM GUIDES

Teachers will find it helpful to duplicate copies of the Grade 13 Physics television program guides for their students. An introductory discussion, before the programs are viewed, followed by a thorough discussion after the program will add greatly to the benefit which the students derive from these broadcasts.

4 ATOMIC EMISSION AND ABSORPTION SPECTRA

Teachers may wish to extend Unit IV, Topic 4, The Electromagnetic Spectrum, to three periods in order to include demonstrations of both the atomic emission and absorption spectra.

PART C
CORRECTIONS TO CURRICULUM S.17C

PAGE	UNIT	TOPIC	
9	III	2 Motion in the Earth's Gravitational Field	– change the second and third lines under section (b) to read: “Experimental study of the dependence of centripetal force on speed and mass”.
10	III	4 Momentum and the Conservation of Momentum	– delete the second line under section (a) “The kinematic . . .”
10	III	6 Potential Energy	– change the last line under section (b) to read: “Gravitational potential energy in general”.
13	IV	6 Photons and Matter Waves	– change statement in parentheses of line one under section (b) to read: “. . . (not more than one photon at a time).” – change the formula for the momentum of a photon on line 2 section (d) to read: $P = \frac{h\nu}{c}$

SECRETARIAL PRACTICE

PART A

REDUCTION OF THE EXISTING COURSE

- 1 Section No. 4 (The Organization Secretary) is to be reduced and is to read:
“Organization of an association – nature, aims and objectives; meeting of an association – notice, agenda, rules of conduct, order of business, preparing and passing motions or amendments, presentation of reports, writing of minutes.”
- 2 Section No. 5 (Reporting procedure) on page 18 of Curriculum RP-31 is to be deleted.

PART B

SUGGESTIONS FOR TEACHING IN DEPTH

- 1 On page 18 of Curriculum RP-31, in Part C there are a number of suggestions for teaching in depth.
- 2 More original work by the students is suggested. Reports in manuscript form may be required, prepared by an individual student or students in small committees, dealing with topic number 4 (organization of an association) of Part B of the course. Original work in this topic may include some role-playing, involving the presentation of motions, the making of amendments and recording the minutes (which would not be verbatim reports).
Students may also be required to write the minutes of a meeting from a rough draft of the proceedings.

REFERENCE BOOKS

- BEAMER, ESTHER KIHN and others. *Effective Secretarial Practices*, 4th ed. Cincinnati, South-Western, 1962. Agent: Gage, Toronto.
- CANADA. CIVIL SERVICE COMMISSION. *Office Manual*, Ottawa, Queen's Printer.
- NEWMAN, DOROTHY M. and JEAN P. *Canadian Business Handbook*, Toronto, McGraw-Hill (c1964).

